

Appl. No. 09/944,477  
Amdt. Dated February 16, 2004  
Reply to Office Action of November 28, 2003

• • R E M A R K S / A R G U M E N T S • •

The Official Action of November 28, 2003 has been thoroughly studied. Accordingly, the following remarks are believed to be sufficient to place the application into condition for allowance.

Claims 1-5 are pending in this application.

Claims 1-6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,525,407 to Ness in view of U.S. Patent No. 4,107,364 to Sisson "optionally" further taken with U.S. Patent No. 5,543,206 to Austin et al.

For the reasons set forth below it is submitted that all of the pending claims are allowable over the prior art of record and therefore, each of the outstanding rejections of the claims should properly be withdrawn.

Favorable reconsideration by the Examiner is earnestly solicited.

The Examiner has relied upon Ness as teaching that it was known at the time of applicant's invention to "form a composite elastic which included the steps of providing an elastic material and intermittently bonding the elastic to a *nonwoven fabric* on both upper and lower surfaces of the elastic material.

The Examiner has relied upon Sisson as suggesting that:

...it was known to intermittently bond a nonwoven of elastic filaments to a nonwoven of inelastic by elongtable filaments.

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The Examiner takes the position that:

The reference to Sisson suggested that those skilled in the art would have bonded the nonwoven elastic web 24 with the nonelastic web 22 at cross over points 26 wherein the bonding would have been at discrete locations, see Figure 1. The reference suggested that after formation one skilled in the art would have stretched the web wherein the nonelastic web would have been elongated and oriented as depicted in Figure 2. after retraction of the elastic (contraction) subsequent to elongation, the inelastic filaments 22 loop, bulk and bunch up.

The Examiner states:

...applicant is advised that one viewing Ness would have understood that the nonwoven materials of Sisson would have been useful in the operation as puckering was desired in the finished assembly.

In combining the teachings of Ness and Sisson the Examiner takes the position that:

...it would have been obvious....to employ the nonwoven web of Sisson in the process of Ness for making a textured and puckered elastic composite web.

Applicant respectfully disagrees with the Examiner's position.

Ness requires the use of at least two separate members including an elastic member (10) and a non-gathered substrate (12). The elastic member and substrate are intermittently bonded in a regular or irregular pattern as discussed at column 3, lines 8-10 and shown in Fig. 2.

"As shown in FIG. 2, the composite may be stretched in any direction, imparting extensibility and elasticity to the composite. The elastic must have sufficient strength to pucker or gather the substrate, as shown at 16 in FIG. 3, when the tension is released." (column 3, lines 16-20).

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On page 2 of the Official Action, in response to applicant's position that Ness teaches at least two separate members and Sisson teaches a single layer the Examiner states:

The applicant is advised that the reference to Sisson suggested that distinct layers would have been formed in the operation (i.e. distinct nonwoven layers) followed by bonding of these distinct non-woven layers, see column 13, lines 48-52. clearly one embodiment described by Sisson did in fact form a single layer on the material as a single layer nonwoven by mingling the fibers at laydown as depicted in Figure 6 for example while another embodiment envisioned by Sisson included formation of distinct nonwoven layer which were later subjected to bonding, see Figure 19 for example where the layers were brought down upon the vacuum conveyor as separate layers. Clearly the ordinary artisan would have recognized that one skilled in the art at the time the invention was made would have understood that Sisson suggested the joining of separate layers of the materials of nonwoven was suggested by Sisson.

It is applicant's position that the embodiment of Sisson that is depicted in Fig. 6 in which two separate layers of materials are superimposed and formed into a single composite layer of material involves a completely different process and structure than used in the embodiment of Sisson that is depicted in Fig. 3.

Note that in the description of Fig. 6 at column 19, lines 41-43, Sisson discloses that the superimposed layers are bonded in a heat bonding nip 62 to produce a "coherent autogenously bonded cloth web 64."

In reference to Fig. 6, Sisson teaches:

The streams of filaments 40 and 42 are preferably extruded vertically downwardly through ambient air, as shown, to a draw section where they are passed through draw roll sets 44 and 46, respectively, for mechanical drawing to reduce each filament to textile denier as the filaments are pulled thereby from the dies 36 and 38. (column 19, lines 11-17)

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After the layers of filaments 40 and 42 are drawn to a desired diameter, they are laid down on a forming surface 54 to form an unbonded web 60 that is "bonded in a heated bonding nip 62 within the forming section 58 to produce a coherent autogenously bonded cloth web 64." (column 19, lines 43-44).

After bonding:

The bonded cloth web 64 is subsequently passed through an incremental stretch roll section 66 to produce a one-way stretch elastic cloth 68 which is then wound onto a take-up roll 70. (column 19, lines 44-48)

Applicant's claim invention is directed to a process in which the first web is stretched in step (b), then superimposed and bonded to a second web in step (d) (while in an extended state as discussed on page 8, lines 2-4 and depicted in Fig. 2) to form a composite web which is further stretched in step (e).

The embodiment of Fig. 6 of Sisson which the Examiner relies upon as teaching two separate layers that are used to form a composite web **does not** teach applicant's claimed manner of stretching or extending the elastically stretchable layer and composite sheet.

Note, the effect of drawing the fibers in Sisson to reduce their diameter is does not maintain the layers under extension as required by applicant's invention. Moreover, the drawing is applied so that it affects the individual fibers as is known in the art.

The Examiner's statement that Sisson suggests that:

... after formation one skilled in the art would have stretched the web wherein the nonelastic web would have been elongated and oriented as depicted in Figure 2. after

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retraction of the elastic (contraction) subsequent to elongation, the inelastic filaments  
22 loop, bulk and bunch up...

is not at all germane or relevant to the embodiment of Sisson in Fig. 6 which the Examiner relies upon as being directed to a single layer.

Moreover, the Examiner's reliance upon Sisson does not render obvious applicant's claimed manner of utilizing two sequential stretching or extension steps and maintaining the extension between the steps.

Accordingly, it is clear that Sisson teaches two separate embodiments that are distinguishable from one another.

The Examiner has stated that the "nonwoven materials of Sisson would have been useful in the operation of puckering."

However, it is noted that the "looping, bulking and bunching of the non-elastic filaments" as taught by Sisson occurs within the mixture of the non-elastomeric filaments and the non-elastic filaments as shown in the figures.

It is noted that, as shown in Fig. 9, Ness requires that only the elastic member pucker.

Accordingly, it is not clear how features of Sisson could be incorporated into Ness and function properly.

It is very important to recognize that Ness teaches that the elastic member can be a non-apertured elastic band or a reticulated elastic (as depicted in Fig. 4 and 9).

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Neither the non-elastic band nor the reticulated elastic of Ness is in any way comparable to the nonwoven layers of Sisson or Austin et al.

Accordingly, it is submitted that the Examiner's position that the resulting combination of Ness and Sisson would include the bonding at the "cross over points 26" in Fig. 1 is completely in error, especially inasmuch as the Examiner only proposes that it would have been obvious to "employ the nonwoven web of Sisson in the process of Ness." → Note, there would be no cross over points between the non-apertured elastic band or reticulated elastic and substrate fibers in the modification of Ness and Sisson which the Examiner proposes, because Ness does not teach a nonwoven elastic member.

None of the prior art references teach applicant's claimed manner of stretching the first web in step (b), then superimposing and bonding a second web to the first web in step (d) (while in an extended state as discussed on page 8, lines 2-4 and depicted in Fig. 2) to form a composite web which is further stretched in step (e).

Note, applicant's independent claim requires extending the composite web and allowing the extended composite web to retract by an elastic contraction force of the first web to thereby obtain a composite sheet in which individual thermoplastic fibers of the second web are neither fused nor mechanically entangled tightly with each other between discrete areas where the first and second webs are joined.

Sisson teaches that the thinner filaments of the web are bonded (as shown) and does not teach that extending the web results in a fibers that are neither fused nor mechanically entangled tightly

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with each other between areas where separate first and second web structures are joined together. If anything Sisson teaches fibers that can be stretched and drawn to have thinner diameters

The Examiner's statement that:

...applicant is advised that one viewing Ness would have understood that the nonwoven materials of Sisson would have been useful in the operation as puckering was desired in the finished assembly

makes it seem as though Ness is only concerned with forming a puckered article. This is not the case at all. Ness is concerned with forming Elastic Composites as set forth in the title. Ness is primarily interested in incorporating an elastic material into the articles that are listed at column 1, lines 7-11.

The elastic material is a non-apertured elastic band or reticulated elastic.

The Examiner has relied upon Austin as teaching the use of different webs on each side of an elastic.

The Examiner's further (optional) reliance upon Austin does not address or overcome the differences between Ness and Sisson discussed above.

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is respectfully submitted that the Examiner cannot rely upon the prior art as required under 35 U.S.C. §103 to establish a *prima facie* case of obviousness of applicant's claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

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It is submitted that the claims, as now amended, and the discussion contained herein clearly show that the claimed invention is novel and neither anticipated nor obvious over the teachings of the prior art and the outstanding rejection of the claims should hence be withdrawn.


Therefore, reconsideration and withdrawal of the outstanding rejection of the claims and an early allowance of the claims is believed to be in order.

It is believed that the above represents a complete response to the Official Action and reconsideration is requested.

If upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved, the Examiner is invited to contact applicant's patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,



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